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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/851,554	05/08/2001	Stepan Sokolov	SUN1P833/P6212	4023

22434 7590 10/26/2005

BEYER WEAVER & THOMAS LLP  
P.O. BOX 70250  
OAKLAND, CA 94612-0250

EXAMINER
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YIGDALL, MICHAEL J

ART UNIT	PAPER NUMBER
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2192

DATE MAILED: 10/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Interview Summary</b>	<b>Application No.</b> 09/851,554	<b>Applicant(s)</b> SOKOLOV ET AL.	
	<b>Examiner</b> Michael J. Yigdal	<b>Art Unit</b> 2192	

All participants (applicant, applicant's representative, PTO personnel):

(1) Michael J. Yigdal. (3) \_\_\_\_\_.

(2) Ramin Mahboubian (44,890). (4) \_\_\_\_\_.

Date of Interview: 19 October 2005.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☐ Yes e) ☒ No.  
If Yes, brief description: \_\_\_\_\_.

Claim(s) discussed: 1.

Identification of prior art discussed: U.S. Patent No. 6,304,949 (Houlsdworth), U.S. Patent No. 5,903,899 (Steele, Jr.).

Agreement with respect to the claims f) ☐ was reached. g) ☒ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Discussed the nature of the invention and Applicant's proposed amendment to claim 1. Discussed possible additions to the claim to further define the invention. Applicant's representative indicated that the other independent claims could be canceled and/or amended to reflect the same scope. Applicant's representative plans to file a formal written reply to the last Office action for the examiner's consideration.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN ONE MONTH FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

MY



**TUAN DAM**  
**SUPERVISORY PATENT EXAMINER**

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

\_\_\_\_\_  
Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

#### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews

##### Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

#### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

#### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

# **BEYER WEAVER & THOMAS, LLP**

INTELLECTUAL PROPERTY LAW

590 W. El Camino Real, Mountain View, CA 94040  
Telephone: (650) 961-8300 Facsimile: (650) 961-8301  
www.beyerlaw.com

## **FACSIMILE COVER SHEET**

October 17, 2005

Receiver: Examiner Yigdall

TEL #:

FAX #: (571) 273-3707

Sender: Susan W. Xu for Ramin Mahboubian

Our Ref. No.: SUN1P833

Re: Application No. 09/851,554

Pages Including Cover Sheet(s): 05

### **MESSAGE:**

Dear Examiner Yigdall:

Attached please find APPLICANT INITIATED INTERVIEW REQUEST FORM.

### **CONFIDENTIALITY NOTE**

The information contained in this facsimile (FAX) message is legally privileged and confidential information intended only for the use of the receiver or firm named above. If the reader of this message is not the intended receiver, you are hereby notified that any dissemination, distribution or copying of this FAX is strictly prohibited. If you have received this FAX in error, please immediately notify the sender at the telephone number provided above and return the original message to the sender at the address above via the United States Postal Service. Thank you.

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**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

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In re application of: Sokolov et al.

Attorney Docket No.: SUN1P833/P6212

Application No.: 09/851,554

Examiner: YIGDALL, MICHAEL J.

Filed: May 8, 2001

Group: 2122

Title: IDENTIFYING REFERENCES TO  
OBJECTS DURING BYTECODE VERIFICATION

Confirmation No.: 4023

**CERTIFICATE OF FACSIMILE TRANSMISSION**I hereby certify that this correspondence is being transmitted by  
facsimile to fax number 571-273-3707 of the U.S. Patent and  
Trademark Office on October 17, 2005.

Signed: \_\_\_\_\_

Susan W. Xu

**APPLICANT INITIATED INTERVIEW REQUEST FORM**Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Tentative Participants:

- 1) R. Mahboubian
- 
- 3)

- 2)
- 
- 4)

Proposed Date of Interview: October 19, 2005

Proposed Time: 2:00 PM (Eastern Time)

Type of Interview Requested:

☒ Telephone ☐ Personal ☐ Video ConferenceExhibit to be Shown or Demonstrated: ☐ Yes ☒ No

If yes, provide brief description:

**ISSUES TO BE DISCUSSED**

Issues (Rej., Obj., etc.)	Claims/ Fig., #s	Prior Art	Discussed	Agreed	Not Agreed
1) 103	Claim 1	Houlsdworth Steele Jr. Cocchi et al.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3)			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

SUN1P833/P6212

1 of 4

**BRIEF DESCRIPTION OF AGRUMENTS TO BE PRESENTED:**

It is noted that U.S. Patent NO. 6,304,949 (*Houlsdworth*) states:

FIGS. 2 to 7 each schematically represent a number of discrete memory areas from the system of FIG. 1, and in particular a heap memory HM holding a large number of data objects DO for use by various program threads. The following examples are compliant with memory management techniques in the Java (.RTM. Sun Microsystems Inc) virtual machine and the terminology should be construed accordingly. It will be recognized however that the present invention is not restricted to Java-compliant systems, object-oriented language systems, or to purely virtual memory management.

In the arrangement shown, it is the heap memory HM for which garbage collection is performed such that data objects are removed following their last or only reference by a program. Each operating program thread has its own collection of stack frames SF. To localize the garbage collection process (as will be described), each stack frame is provided with a respective reference stack RS. A handle table HT is provided for carrying pointers identifying data object locations within the heap. It will be noted that, whereas conventional systems constrain all references to heap objects to be routed via a handle table, in the embodiments of the present invention, objects are referenced direct by pointers from both stack frames SF and their associated reference stack RS. In this way, a handle table may under certain circumstances be avoided, as in the example to be described below with reference to FIG. 7. [Col. 4, lines 12-39]

However, it is respectfully submitted that *Houlsdworth* does NOT teach or suggest: storing a reference that is likely to be the only reference to an object on a reference stack.

Moreover, it is respectfully submitted that the cited art does NOT teach or suggest: translating a command into another command that indicates that it is likely that a reference is the only reference to an object when (a) it is likely that the command places a reference to an object on an execution stack and (b) there is a change in the flow control between the time the command places the reference on the execution stack and the time the reference is used to access the object, thereby effectively indicating the command it is likely to be the only reference to the object.

1. **(Proposed Amendment)** A method of tracking references that are likely to be the only references to a plurality of objects stored in of an object-oriented programming environment, said method comprising:

determining whether a command is likely to place a reference to an object on an execution stack which is used to execute computer program code in said object-oriented programming environment;

determining whether there is a change in the flow control between the time command is likely to place said reference to said object on said execution stack and the time said reference is used to access said object when said determining determines that said command is likely to place a said reference to said an object on an said execution stack;

translating said command into another command that indicates that it is likely that said reference is the only reference to said object when said determining determines that said command is likely to place said reference to said object on said execution stack and said determining determines that there is a change in the flow control between the time said command is likely to place the reference to said object on said execution stack and the time said reference is used to access said object, thereby effectively indicating that said another command is likely to place the only reference to said object on said execution stack; and

executing said another command;

placing a said reference to said object on a reference stack associated with said execution stack when said another command is executed, wherein said reference stack is not used to execute computer program code and is designated to store only references that are likely to be the only references to various objects which have been stored in a heap, thereby storing a reference that is likely to be the only reference to a particular object on said reference stack.

An interview was conducted on the above-identified application on .

\*Note: This form should be completed by applicant and submitted to the examiner in advance of the interview (see MPEP §713.01). This application will not be delayed from issue because of applicant's failure to submit a written record of this interview. Therefore, applicant is advised to file a statement of the substance of this interview (37 C.F.R. 1.33(b)) as soon as possible.

\_\_\_\_\_  
(Applicant/Applicant's Representative)  
Signature)

\_\_\_\_\_  
(Examiner/SPE Signature)